

23. RAT-SNAKES 'MATING'

Motoring down our ghat road I came across two rat-snakes (dhamans) as tightly coiled round each other as a thick rope. On the approach of my car the 'snake-rope' shot up two separate heads, which stared at us, then lowered and the whole then wriggled to a culvert and went down a hole in the culvert wall just as a single snake would—perfect dual control.

DUPABURRAY BUNGALOW,
ATTIKAN P.O.,
VIA MYSORE, SOUTH INDIA,
February 4, 1958.

R. C. MORRIS

[At page 174 of the last number of the *Journal* we have commented on a similar incident reported by Mr. K. R. Sethna.—EDS.]

24. ON A COLLECTION OF FISH FROM DELHI STATE

The study of the fish fauna of Delhi State was undertaken during 1949 at the suggestion of the late Dr. S. L. Hora. Collections were made from all over the State, and the list of species given here may be regarded as being fairly representative of the fish fauna of the State.

PHYSICAL FEATURES

Delhi State is surrounded by Bulandshahr and Meerut districts of Uttar Pradesh on the east, and the Punjab districts of Gurgaon and Rohtak on the south and the north-west respectively. Though situated at a higher altitude of about 709 ft. above sea-level, it is essentially a plateau with an area of 574 square miles. The only river supplying water to this State is the Jumna, which flows along its eastern boundary. Delhi is criss-crossed by irrigation canals bringing water from the Jumna to the agricultural land, village tanks, and ponds.

Jumna River originates in the western Himalayas, 20,720 ft. above sea-level. It flows through Punjab, Delhi, and Uttar Pradesh to meet the Ganges at Allahabad. The level falls by 5,000 ft. in the first 20 miles of its course and 4,500 ft. more before it comes out of its gorge at Faizabad, a distance of about 100 miles from its source. By the time it reaches Delhi, the level falls by another 900 ft. and it becomes a broad river. The differences in its width during summer and winter are very great. During the monsoon months of July and August it is a vast stretch of water about half a mile across, but in the

winter months of December and January it dwindles to a small stream with only knee-deep water at places. During the monsoon months some of the hill-stream species are washed down the river and are available at Delhi and all such species collected locally are also included in the list.

Delhi State has an average annual rainfall of only 26.24 inches, on account of which many of the ponds and tanks contain very little water for the greater part of the year. This is a big handicap for the development of fisheries in the State.

LIST OF SPECIES

The classification followed is mainly the one proposed by L. S. Berg (1940). Local names are also indicated wherever available.

Family Cyprinidae

1. *Labeo rohita* (Hamilton) ... Rohu
2. *Labeo calbasu* (Hamilton) ... Kalbons
3. *Labeo gonius* (Hamilton) ... Kurchia
4. *Labeo dero* (Hamilton) ... Chilwa
5. *Labeo pangusia* (Hamilton)
6. *Cirrhina mrigala* (Hamilton) ... Mirgal, Narain
7. *Cirrhina reba* (Hamilton) ... Raia, Suni
8. *Catla catla* (Hamilton) ... Katla
9. *Barbus (Tor) tor* (Hamilton) ... Mahaseer, Raja
10. *Puntius sarana* Hamilton ... Puti
11. *Puntius sophore* Hamilton ... Bhur, Puti
12. *Puntius conchoni* Hamilton ... Puti
13. *Puntius ticto* Hamilton ... Puti
14. *Puntius punjabensis* Day
15. *Crossocheilus latius punjabensis*
Mukerji
16. *Garra gotyla* (Gray)
17. *Amblypharyngodon mola* (Hamilton)
ton) ... Meluwa
18. *Aspidoparia morar* (Hamilton) ... Moraki
19. *Barilius vagra* Hamilton
20. *Rohtee cotio* (Hamilton) ... Chanda

Sub-family RASBORINAE

21. *Esomus danricus* (Hamilton) ... Mola

Sub-family ABRAMIDINAE

22. *Chela bacaila* (Hamilton) ... Chela
23. *Laubuca atpar* (Hamilton)

Sub-family PSILORHYNCHINI

[Family Psilorhynchidae of Hora (1925)]

24. *Psilorhynchus balitora* (Hamilton)Family **Cobitidae**25. *Nemachilus corica* (Hamilton)26. *Nemachilus montanus* (McClell.)27. *Nemachilus zonatus* (McClell.)

Sub-family BOTINI

28. *Botia lohachata* Chaudhuri ... *Billi*Family **Siluridae**29. *Wallago attu* (Bloch & Schneider) *Malli*30. *Ompok bimaculatus* (Bloch) ... *Pabda*31. *Ailia coila* (Hamilton) ... *Basmati*Family **Bagridae**32. *Mystus (Osteobagrus) seenghala*
(Sykes) ... *Singhara*33. *Mystus (Mystus) cavasius* (Hamilton)
... *Tengra*34. *Mystus (Mystus) tengara* (Hamilton)
... "35. *Mystus (Mystus) aor* (Hamilton) ... "36. *Rita rita* (Hamilton) ... *Rita, Ghegra,*
*Khagga*Family **Schilbeidae**37. *Eutropiichthys vacha* (Hamilton) *Bacha*38. *Silonia silondia* (Hamilton) ... *Silond*39. *Clupisoma garua* (Hamilton) ... *Bacha*Family **Saccolobranchidae**40. *Heteropneustes fossilis* (Bloch) ... *Singi*Family **Sisoridae**41. *Bagarius bagarius* (Hamilton) ... *Gonch*42. *Gagata cenia* (Hamilton)43. *Nangra punctata* Day44. *Glyptothorax telchitta* (Hamilton)45. *Sisor rhabdophorus* HamiltonFamily **Ophiocephalidae (Ophicephalidae)**46. *Channa punctatus* (Bloch) ... *Souli*47. *Channa striatus* (Bloch) ... *Soula, Souli*

48. *Channa marulius* (Hamilton) ... *Shai*
 49. *Channa gachua* (Hamilton) ... *Shouli*

Family Gobiidae

50. *Glossogobius giuris* (Hamilton) *Bhelua*

Family Centropomidae (Ambassidae)

51. *Ambassis nama* (Hamilton) ... *Chanda*
 52. *Ambassis ranga* (Hamilton)

Family Anabantidae

53. *Colisa fasciatus* Bloch & Schneider *Kharda*

Family Mugilidae

54. *Mugil corsula* Hamilton ... *Andowari*
 55. *Mugil cascasia* Hamilton

Family Mastacembelidae

56. *Mastacembelus armatus* (Lacépède) ... *Bam*
 57. *Rhynchobdella aculeata* (Bloch) *Giluwa*

Family Notopteridae

58. *Notopterus chitala* (Hamilton) ... *Chital, Pari*
 59. *Notopterus notopterus* (Pallas) ... *Pholee, Mo*

Family Clupeidae

Sub-family CLUPEINI

60. *Gadusia chapra* (Hamilton) ... *Khuri*

Family Belonidae (Xenentodontidae)

61. *Xenentodon cancila* (Hamilton) *Chonchwali*

Family Amphipnoidae

62. *Amphipnous cuchia* (Hamilton) *Bam*

IMPORTED VARIETIES

Besides the sixty-two species listed above, the following species of freshwater, estuarine, and marine fishes are imported from outside Delhi and are available in the fish-markets:

1. *Hilsa ilisha* (Hamilton) ... *Ilish, Hilsa*
 2. *Clarias batractus* (Linnaeus) ... *Magur*
 3. *Nandus nandus* (Hamilton)
 4. *Eleutheronema tetradactylus* (Shaw) ... *Salmon*
 5. *Pampus argenteus* (Euphrasin) ... *Pomfret*

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|--|------------|
| 6. <i>Scomber microlepidotus</i> Rüppell | Mackerel |
| 7. <i>Lates calcarifer</i> (Bloch) | ... Bhetki |
| 8. <i>Cynoglossus</i> sp. | ... Chepti |

REMARKS

In several locally available species slight variations in body proportions, number of fin-rays, scale counts, and coloration have been noticed, which along with their description, bionomics, and ecology are being published in the form of a separate handbook.

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DEPARTMENT OF ZOOLOGY,
UNIVERSITY OF DELHI,
DELHI,
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N. N. MAJUMDAR

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25. PARASITISM OF *OPHICEPHALUS GACHUA* HAMILTON
BY THE COPEPOD *ARGULUS INDICUS* WEBER

Max Weber (1892) originally described the female of *Argulus indicus* Weber from the east coast of Java. The male of this species was later described by Wilson (1926, 1944) from Bangkok (Thailand).

The above species was reported from India for the first time by Ramkrishna (1952) who in his paper referred that the collection of the parasites was previously made by S. C. Bough from the skin of *Ophicephalus punctatus* Bloch from Champahati, a village 15 miles south of Sealdah Station, West Bengal.

On 7 April 1956, during the survey of the fish fauna of Gokalpur Lake, Jabalpur, M.P., 2 specimens of *Ophicephalus gachua* Hamilton were collected from a small piece of fresh water which later runs